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proposed it, with the omission of the words, the exclusion of the words was suggested.

Mr. S. SMITH proposed a way of amendment, that the words, "and of the relieving of the powers and necessities," be omitted.

Rev. Mr. GARNNEY seconded the amendment, "which was agreed to without division."

Mr. A. CONYTON then moved that the words "determination thereof" be omitted with "in view of the insertion of the words "consent and report."

Mr. A. STUART seconded this amendment, and desired the yeas and nays to be called. The yeas and nays in regard to the inconvenience of the present mode of voting in the provincial Synod a minority of clerical and lay members were in favor of the amendment. The yeas and nays were represented by five clerical and five lay members. The yeas were represented by five clerical and six lay representatives voting for the yeas and the nays were represented by five clerical and nine lay representatives on the opposite side.

Mr. BATES thought something more than a report was required. His opinion there should be some declaratory determination in regard to the amendment.

Mr. FOSBROTH thought the word "determination" ought to be allowed to remain, and would support the resolution.

Mr. CONYTON STUART obtained leave to withdraw his resolution, in order to bring it forward on the next sitting day, in a form which he thought would meet the views of all parties.

The Synod adjourned shortly after 10 till half past 3 o'clock.

ERRATUM.—We are requested by Mr. Charles Campbell to correct a slight error in the report of his speech in the Church of England Synod last night (July 6th):—"It would be time to talk about that when there were twenty *divinity* students at St. Paul's College, instead of only one, as at present." The word "divinity" being omitted in the report, Mr. Campbell is reported to have said that there is only one student at St.

ROYAL SOCIETY OF NEW SOUTH WALES

The usual monthly meeting of this Society was held last night at the Upper Room of the Exchange. The Rev. W. B. Clarke occupied the chair and between twenty and thirty members were present.

The minutes of last meeting were read and confirmed.

MEMBERS.

On the motion of Mr. CHARLES ROLLESTON, seconded by the Rev. W. B. CLARKE, Mr. Colin Fraser, M.P., was ballotted for, and unanimously elected a member of the Society.

The CHAIRMAN announced that at the next meeting of the Society the following gentlemen would be proposed as members:—Dr. Arthur Rugeley, Bart., Mr. J. H. L. ...

Spencer, T. Croudace, and A. H. Richardson. Mr. E. Moriarty, a member of the old Philosophical Society, and Mr. J. H. St. John, who had also lost interest in joining the Society.

CONTRIBUTION TO THE SOCIETY.

THE CHAIRMAN laid upon the table a contribution on the Mineralogy of Victoria, by George Ulrich, Esq., F.G.S.

WATER SUPPLY TO ADELPHY.

DR. GARRARD read the following paper:

REMARKS ON THE REPORT OF THE JOINT COMMISSIONERS, ESPECIALLY WITH REFERENCE TO THE GORDON'S RIVER SCHEME.

THESE remarks on an adequate supply of fresh water to great cities, alike for the purposes of health and of manufacture, is now so universally admitted that no words need be said to show that the subject is one of the most important situated as it is in a hot climate, and certain (if not indubitable) of great future commercial and manufacturing pro-

city, it is the utmost importance that the project be carried out as soon as possible. The project is not only not a superfluous one, but certainly, twice within a comparatively recent period the citizens have been inconvenienced by being plagued on short allowance. In order to economize the supply of electric heat to remain unwatered in the hot and cold weather, the first step with unnumbered difficulties has been the water had been shut off at night in order to diminish the waste. In consequence of this limited supply, there has been a loss of money for manufacturing industries to create themselves a distasteful system. Water users have been forced to rely on the city's supply. Water has been justly alarmed lest the growth of population should rapidly outstrip the capacity of the existing water-works.

80 divisions was the urgency that the Government asked for a commission to investigate the whole subject. The members of the commission were to be drawn from the inquiry, and made an exhaustive list of all the sources of supply. After considering the merits and demerits of each separate scheme, they decided finally on recommending a plan for drawing water from the Upper Terepate, and storing it in a reservoir near Prospekt. At the same time they expressed their opinion that it would be the duty of the Government to make the most judicious use of their consciences, that there may be general criticism on their labour may correct its errors, and supply its omissions. "We now," they say, "invite the closest scrutiny of our results, sensible that if our scheme be in the main correct, it will be the duty of the Government to

It is in the spirit of this invitation that I now venture to review the scheme recommended by the Commission; *as* with all the other schemes, the tendency of the gentleman employed, and with a hearty appreciation of the painstaking labours, I cannot but think that the conclusion they have come to is erroneous, and requires, in the interest of the public to be revised. It is now nearly nine months since this report has been issued, and yet the scheme has not been adopted, nor has it been adequately discussed, though it is of the utmost importance that no grave error should be committed. Under the impression that a dis-

1. After a careful consideration of the report, I cannot avoid the conviction that there are many grave objections to the report, and that the Commissioners—that is, their natural enthusiasm for the work—have not prevented those objections from being fully presented in their report, and that to this extent therefore they have left it to outside critics to put the project in its least favourable light. I also think that they have too readily discarded the proposal

The Upper Nepean scheme involves the necessity of constructing a conduit of sixty-three miles in length. This would not be so costly to make but costly to repair, and considering as it would sometimes be placed in places of a tunnel, sometimes of open conduit, passing under roads and over roads, would be exposed to a great variety of risks of damage. It is necessary, by this scheme, to go to this distance from Sydney to get the requisite altitude, which is only attained at Mennan's Neck, the point where the water is first above the level of the sea, of four hundred and twenty feet above the level of the sea, or two hundred and

cliff feet above the top level of the water in the existing Crown-street reservoir. This is an elevation sufficient to deliver the water with good pressure on the top of the highest building in Sydney. But, unfortunately, the advantage is watered in the course of bringing the water down. It is impossible to find any route by which the channel can be maintained at the desirable height, and the storage reservoir at Prospect could only deliver water 31 feet above the top level of the Crown-street Reservoir. Thus, out of the 100 feet of head, 69 feet and 31 feet is forfeited on the journey between Pheasant's Nest and Prospect. This remaining elevation of 31 feet is mostly lost in delivering the water into the Crown-street Reservoir, as the distance to be traversed between those

The construction of the storage reservoir itself is not free from objection. It is to be ignored by means of a huge

which, at its deepest point, would be 80 feet. This is a great height, and would justify considerable anxiety about its security. Should it burst, the damage would be very serious; it would take some months to repair it, and the reservoir could not be refilled until a twelve-months' period. Moreover, a large amount of the labour and expense involved in the construction of this dam would be wasted, seeing that only the upper 25 feet of the water could be drawn off. Fifty-five feet, therefore, of height of the dam would serve no useful purpose save in the storage of water in concrete. The cost of the work would be 10,000,000 francs (£1,600,000), but 200 millions would remain unutilised, unless pumped out, as they would lie below the level of the outlet.

Another and very serious objection to the scheme is that it provides for storage on the line of supply. The consequence of this is that the water will be stored in the reservoirs only for a very partially impounded. In this country where heavy floods alternate with prolonged droughts, our aim should be to detain in the wet weather as much water as we may want in the dry, and only to allow that to escape which we wish to get rid of. In the usual practice of the waterworks of this country the water is virtually allowed. The Commissioners propose to draw off no water at all unless the river is running at the rate of 10,000,000 gallons per diem, as that amount is required for the settlers lower down the river, and the conduit is only to be constructed to carry 80,000,000 gallons.

will be contented with the tea million pallons, especially in dry weather, or whether they will claim more, or claim compensation. Some of the water, therefore, the Commissioners must give away—some they must allow to go to waste. It is only what is intercalate between these two limits—between what they must give and what they must lose—that they can secure. In a dry period, therefore, when the reservoir might urgently require replenishing, if there were only occasional showers

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